Health Update: Avian Influenza

August 16, 2004

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FROM: **RICHARD C. DUNN**
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SUBJECT: **Update on Avian Influenza A (H5N1)**

This update reviews the current situation and the surveillance and diagnostic recommendations for avian influenza A (H5N1). The recommendations for avian influenza A (H5N1) remain at the enhanced level established in February 2004. As detailed in the recommendations below, vigilance in the clinical setting for avian influenza (H5N1) requires that health-care providers consistently obtain international travel and other exposure risk information for persons who have specified respiratory symptoms.

Current Situation

On August 12, 2004, the Vietnamese Ministry of Health officially reported to the World Health Organization (WHO; see http://www.who.int/csr/don/2004_08_12/en/) three human deaths from confirmed avian influenza H5 infection. Additional tests are needed to determine whether the virus belongs to the same H5N1 strain that caused 22 cases (15 deaths) in Vietnam and 12 cases (8 deaths) in Thailand earlier this year.

Cambodia, China, Indonesia, Japan, Laos, South Korea, Thailand, and Vietnam were previously affected by widespread H5N1 outbreaks in poultry during early 2004. At that time, more than 100 million birds either died from the disease or were culled (killed) in efforts to contain the outbreaks. Human cases (34 in all) were reported only in Thailand and Vietnam. The last case officially confirmed and reported to the WHO by Vietnam occurred in February 2004.

Beginning in late June 2004, however, new lethal outbreaks of highly pathogenic avian influenza A (H5N1) among poultry were reported to the World Organization for Animal Health (OIE) by China, Indonesia, Thailand, and Vietnam. The deaths reported by Vietnam on August 12 are the first reported human cases associated with this second wave of H5N1 infection among poultry. CDC is in communication with WHO and will continue to monitor the situation.

Enhanced U.S. Surveillance, Diagnostic Evaluation, and Infection Control Precautions for Avian Influenza A (H5N1)

CDC recommends maintaining the enhanced surveillance efforts by state and local health departments, hospitals, and clinicians to identify patients at increased risk for avian influenza A (H5N1) that were issued by CDC on February 3, 2004 (see http://www.cdc.gov/flu/han020302.htm). Guidelines for enhanced surveillance are:

Testing for avian influenza A (H5N1) is indicated for hospitalized patients with:

a. Radiographically confirmed pneumonia, acute respiratory distress syndrome (ARDS), or other severe respiratory illness for which an alternate diagnosis has not been established, AND
b. History of travel within 10 days of symptom onset to a country with documented H5N1 avian influenza in poultry and/or humans (for a regularly updated listing of H5N1-affected countries, see the OIE Web site at http://www.oie.int/eng/en_index.htm and the WHO Web site at http://www.who.int/en/).

Collection of specimens and testing for avian influenza A (H5N1) should be considered on a case-by-case basis following consultation with state and local health departments by contacting 1-800-392-0272 for hospitalized or ambulatory patients with:

a. Documented temperature of >38°C (>100.4°F), AND
b. One or more of the following: cough, sore throat, shortness of breath, radiographically confirmed pneumonia, acute respiratory distress syndrome (ARDS), or other severe respiratory illness for which an alternate diagnosis has not been established, AND
c. History of direct contact with poultry (e.g., visited a poultry farm, a household raising poultry, or a bird market) or a known or suspected human case of influenza A (H5N1) in an H5N1-affected country within 10 days of symptom onset.

Infection control precautions for H5N1 remain unchanged from the CDC interim recommendations published on February 3, 2004 http://www.cdc.gov/flu/han020302.htm. These recommendations are further described in the CDC guidance document, "Interim Recommendations for Infection Control in Health-Care Facilities Caring for Patients with Known or Suspected Avian Influenza" http://www.cdc.gov/flu/avian/professional/infect-control.htm.

Laboratory Testing Procedures

Highly pathogenic avian influenza A (H5N1) is classified as a select agent and must be worked with under Biosafety Level (BSL) 3+ laboratory conditions. This includes controlled access double door entry with change room and shower, use of respirators, decontamination of all wastes, and showering out of all personnel. Laboratories working on these viruses must be certified by the U.S. Department of Agriculture. CDC does not recommend that virus isolation studies on respiratory specimens from patients who meet the above criteria be conducted unless stringent BSL 3+ conditions can be met. Therefore, respiratory virus cultures should not be performed in most clinical laboratories and such cultures should not be ordered for patients suspected of having H5N1 infection.

Clinical specimens from suspect A (H5N1) cases may be tested by PCR assays using standard BSL 2 work practices in a Class II biological safety cabinet. In addition, commercial antigen detection testing can be conducted under BSL 2 levels to test for influenza at the treating facility and/or the State Public Health Lab (SPHL). However, keep in mind that these tests have a limited sensitivity for human influenza and no available data as to their ability to detect avian influenza A (H5N1) virus. Respiratory PCR testing is available at the SPHL and will be utilized if any person meets the criteria stated above following consultation.

CDC Influenza branch has requested that if specimens are to be collected for avian influenza A (H5N1), multiple specimens (e.g. nasal swabs, nasal aspirates, etc.) be collected and that any specimens tested at the SPHL be forwarded to them regardless of results.

Additional Avian Influenza A (H5N1) Information

* For information about reported outbreaks of avian influenza A (H5N1) among poultry, see the web site of the World Organization of Animal Health (OIE) at http://www.oie.int/eng/AVIAN_INFLUENZA/home.htm.

* For information about human H5N1 cases, see the WHO web site http://www.who.int/en/

* For clinical information about human H5N1 cases, see:
  - CDC. Cases of influenza A (H5N1) > -> Thailand, 2004. MMWR 2004;53:100-103 http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5305a2.htm.
  - Hien TT, Liem AT, Dung NT, et al. Avian influenza A (H5N1) in 10 patients in Vietnam. New England Journal of Medicine 2004;350:1179-1188.

* For general information about influenza, see the CDC website at http://www.cdc.gov/flu.